

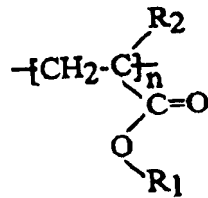
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cont.

(c) a polymer matrix including a polymerizable resin adapted for use in an oral environment which contains at least one of 2,2-bis[4-(2-hydroxy-3-methacryloxypropoxy)phenyl]propane, ethyleneglycol dimethacrylate; triethyleneglycol dimethacrylate, and/or an urethane dimethacrylate resin; a filler, initiator, a coupling agent and, optionally, additional additives.

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<sup>40</sup>  
~~42~~ (New) A microwave curable composition suitable for a denture base according to claim <sup>39</sup>  
~~41~~, wherein said composition comprises (a).

<sup>41</sup>  
~~43~~ (New) A microwave curable composition suitable for a denture base according to claim <sup>40</sup>  
~~42~~, wherein said composition contains at least one acrylic polymer containing repeating monomer units represented by the formula



I

wherein

R<sub>1</sub> represents a hydrogen atom, an alkyl group, a substituted alkyl group, a benzyl group, a hydroxy alkyl group, a cyclic hydrocarbon, an ether group,

R<sub>2</sub> represents a hydrogen atom, a halogen atom, an alkyl group, or a substituted alkyl group, and

n is an integer of two or more.

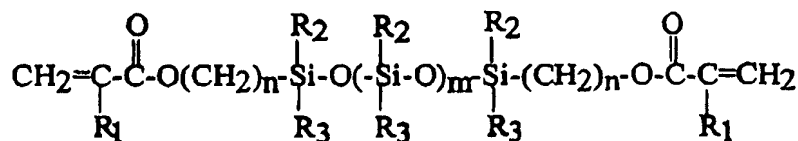
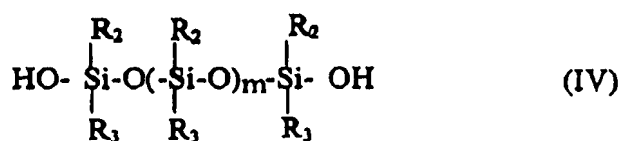
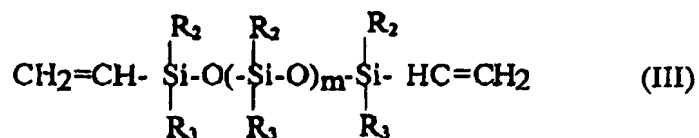
<sup>42</sup>  
~~44~~ (New) A microwave curable composition suitable for a denture base according to claim <sup>41</sup>  
~~43~~, wherein R<sub>1</sub> represents a hydrogen atom, an alkyl group, a cyclic hydrocarbon, a benzyl group, a hydroxy alkyl group, or an ether group.

<sup>43</sup>  
~~45~~ (New) A microwave curable composition suitable for a denture base according to claim <sup>41</sup>  
~~43~~, wherein R<sub>2</sub> represents a hydrogen atom, a halogen atom, or an alkyl group.

<sup>44</sup>  
~~46~~ (New) A microwave curable composition suitable for a denture base according to claim <sup>40</sup>  
~~42~~, wherein said filler comprises an organic filler or an inorganic filler.

39 41, wherein, wherein said composition comprises (b).

39 41, wherein said organopolysiloxane is represented by any of formulas (III), (IV) or (V)



wherein said formulas

m represents a value of 1 to about 6,000,

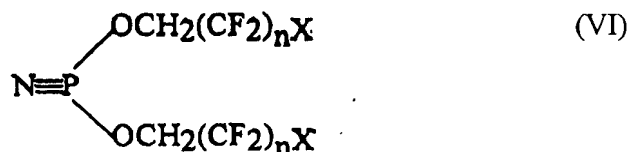
n represents an integer having a value of 1 to 6,

R<sub>1</sub> represents a hydrogen atom or an alkyl group,

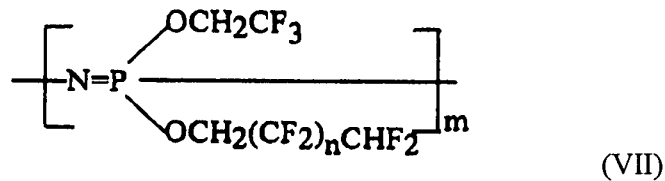
R<sub>2</sub> represents an alkyl group of 1-6 carbon atoms, and

R<sub>3</sub> represents an alkyl group having 1-6 carbon atoms.

39 41, wherein said composition comprises (b) and said at least one phosphonitrile fluoropolymer that is represented by formula (VI):



in which X represents a hydrogen atom or fluorine atom, n is a value of 1 to 11; or  
that has repeating monomer units represented by formula (VII):



in which n represents 3, 5, 7, 9 or 11 and m is from 10,000 to 50,000.

<sup>48</sup><sub>39</sub> 50. (New) A microwave curable composition suitable for a denture base according to claim 41, wherein said composition comprises (c).

<sup>49</sup><sub>48</sub> 51. (New) A microwave curable composition suitable for a denture base according to claim 50, wherein said initiator comprises at least one microwave sensitive compound.

<sup>50</sup><sub>49</sub> 52. (New) A microwave curable composition suitable for a denture base according to claim 51, wherein said initiator comprises at least one member selected from the group consisting of benzoyl peroxide, dilauroyl peroxide, (tert-butyl) peroctoate, tert-butyl perbenzoate, 2,4-dichlorobenzoyl peroxide and 4,4-dichlorobenzoyl peroxide.

<sup>51</sup><sub>49</sub> 53. (New) A microwave curable composition suitable for a denture base according to claim 51, wherein said composition contains 0.05% to 1.0% by weight of said initiator.

<sup>52</sup><sub>48</sub> 54. (New) A microwave curable composition suitable for a denture base according to claim 53, wherein said coupler comprises gamma-methoxypropylene silane or a thiomethacrylate.

<sup>53</sup><sub>40</sub> 55. (New) A microwave curable composition suitable for a denture base according to claim 54, wherein (a) further comprises an amine accelerator.

<sup>54</sup><sub>39</sub> 56. (New) A microwave curable composition suitable for a denture base according to claim 55, wherein said filler comprises particles having a particle size in the range of 0.04 to approximately 10 micrometers.

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cont.

<sup>55</sup>  
~~57~~. (New) A method for forming a hardened object comprising

- (i) forming a hardenable dental composite from a microwave curable composition, or applying a microwave curable resin matrix to a tooth; and
- (ii) obtaining said hardened object by applying microwave energy to harden said composite or cure said resin matrix.

<sup>56</sup>  
~~58~~. (New) A method according to claim <sup>55</sup>  
~~57~~, wherein said composite is a dental prosthetic or orthopedic element.

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<sup>57</sup>  
~~59~~. (New) A method according to claim <sup>55</sup>  
~~57~~, wherein said composite is a dental prosthetic and in (ii) the hardening is intra-oral using a hand-held microwave applicator.

<sup>58</sup>  
~~60~~. (New) A method according to claim <sup>55</sup>  
~~57~~, wherein said dental prosthetic is a composite filling, a crown, a bridge, an inlay, an overlay, a facing, a veneer or orthodontic appliance.

<sup>59</sup>  
~~61~~. (New) A method according to claim <sup>55</sup>  
~~57~~, wherein said microwave curable composite are according to claim 20.

<sup>60</sup>  
~~62~~. (New) A method according to claim <sup>55</sup>  
~~57~~, wherein in said method a hand-held microwave applicator is used in curing said resin matrix.

See Appendix